

CLAIMS:

1. An antigenic peptide for inducing the formation of antibodies having an
5 affinity therefor and for isolating said antibodies, said antigenic peptide comprising of
the formula:

VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY

wherein X is an amino acid selected from the group consisting of LEU and
PHE.

- 10 2. An antigenic peptide for inducing the formation of antibodies having an
affinity therefor and for isolating said antibodies, said antigenic peptide comprising the
formula:

Y-VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY

15 wherein X is an amino acid selected from the group consisting of LEU and
PHE; and

wherein Y is an amino acid selected from the group consisting of SER and
ALA.

- 20 3. An antigenic peptide for inducing the formation of antibodies having an
affinity therefor and for isolating said antibodies, said antigenic peptide comprising of
the formula:

VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY-LYS-HIS-LEU

wherein X is an amino acid selected from the group consisting of LEU and
PHE.

- 25 4. An antigenic peptide for inducing the formation of antibodies having an
affinity therefor and for isolating said antibodies, said antigenic peptide comprising the
formula:

Y-VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY-LYS-HIS-LEU

wherein X is an amino acid selected from the group consisting of LEU and PHE; and

wherein Y is an amino acid selected from the group consisting of SER and
5 ALA.

5. A method for producing antibodies useful in the determination of PTH levels in a biological same comprising the steps:

- a) providing at least one first peptide antigen, said at least one first peptide comprising a peptide fragment of PTH;
- 10 b) administering said at least one first peptide antigen to a host animal to induce antibody production against said at least one first peptide antigen in said host animal;
- c) monitoring antibody titer produced by said administration of said at least one antigen to said host animal;
- 15 d) isolating antisera produced in said host animal by said administration of said at least one peptide antigen; and
- e) selecting antisera from said isolated antisera produced in said host that is capable of binding to a second peptide antigen, said second peptide antigen having the formula:

20 VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY

wherein X is an amino acid selected from the group consisting of LEU and PHE.

6. The method of Claim 5 wherein in step e), said second peptide antigen comprises the formula:

25 Y-VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY

wherein X is an amino acid selected from the group consisting of LEU and

PHE; and

wherein Y is an amino acid selected from the group consisting of SER and ALA.

7. The method of Claim 5 wherein in step b), said host animal is selected
5 from the group consisting of mice and rabbits.

8. The method of Claim 5 wherein in step b), said host animal comprises at least one goat.

9. The antibody produced by the method of Claim 5.

10. The antibody of Claim 9 wherein said antibody further includes a label
10 covalently attached thereto, said label being selected from the group consisting of radioactive, fluorescent, enzymatic and dye tracers.

11. The antibody produced by the method of Claim 6 .

12. The method of Claim 5 wherein in step e), said second peptide antigen
comprises of the formula:

15 VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY-LYS-HIS-LEU

wherein X is an amino acid selected from the group consisting of LEU and PHE.

13. The method of Claim 5 wherein in step e), said second peptide antigen
comprises of the formula:

20 Y-VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY-LYS-HIS-LEU

wherein X is an amino acid selected from the group consisting of LEU and PHE; and

wherein Y is an amino acid selected from the group consisting of SER and ALA.

25 14. The method of Claim 5 wherein in step a), said at least one first peptide antigen comprises amino acid residues 1-34 of PTH.

15. The method of Claim 15 wherein in step a), said (1-34) PTH fragment is selected from a group of species consisting of humans, rats, mice, bovids, dogs and pigs.

16. The method of Claim 15 wherein in step a), said (1-34) PTH peptide
5 fragment has a carrier protein coupled therewith.

17. The method of Claim 15 wherein in step a), said at least one first peptide antigen comprises intact, full-length (1-84) PTH, said intact, full-length (1-84) PTH being selected from a group of species consisting of humans, rats, mice, bovids, dogs and pigs.

10 18. The method of Claim 5 wherein in step a), said at least one peptide antigen comprises the formula:

VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY

wherein X is an amino acid selected from the group consisting of LEU and PHE.

15 19. The method of Claim 5 wherein in step a), said at least one peptide antigen comprises the formula:

Y-VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY

wherein X is an amino acid selected from the group consisting of LEU and PHE; and

20 wherein Y is an amino acid selected from the group consisting of SER and ALA.

20. The method of Claim 5 wherein in step a), said at least one peptide antigen comprises the formula:

VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY-LYS-HIS-LEU,

25 wherein X is an amino acid selected from the group consisting of LEU and PHE.

21. The method of Claim 5 wherein in step a), said at least one peptide antigen comprises the formula:

Y-VAL-SER-GLU-ILE-GLN-X-MET-HIS-ASN-LEU-GLY-LYS-HIS-LEU,

wherein X is an amino acid selected from the group consisting of LEU and

5 PHE; and

wherein Y is an amino acid selected from the group consisting of SER and

ALA.

22. The antibody produced by the method of Claim 12.

23. The antibody produced by the method of Claim 13.

10 24. Test kits and analytical procedures used for the determination of bioactive intact PTH utilizing the antibody produced by the methods of Claims 5, 6, 12, and 13.

15

20

25